



Proposal of a separation strategy of disaster waste in order to increase recycling feasibility in small islands context

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In small islands territories, like Commonwealth of Dominica, that are exposed to an increased frequency and intensity of extreme events, managing disaster waste is becoming a major issue. In the light of a series of context base challenges like limited space for separation and disposal of waste, knowledge and capacity to design an efficient operational plan taking into consideration time constrains related to recovery and reconstruction, insufficient treatment facilities and insufficient funds, most of the disaster waste is disposed directly to landfills that are already reaching capacity, missing the financial opportunities of recycling.

The objective of this poster is to propose a solution for the separation of the disaster waste produced in Dominica by the impact of the category 5 hurricane Maria, in order to increase the recycling rate.

The evaluation and analysis of this study case was realized through field observation and interviews during a 3 weeks expert mission mobilized upon the request of the Caribbean Disaster and Emergency Management Agency and deployed through the UN Environment / OCHA Joint Unit, 3 weeks after the impact. Heavy rains and 300km/hour winds that blew up for almost 8 hours over the whole island caused the destruction of almost 100% of the agriculture sector, 90% of buildings was damaged or partially damaged, and 75 % of tropical forest was reported blown down or having foliage and branches stripped, roadblocks due to boulders, trees and soil from landslides. The destruction resulted in enormous quantities of mixed waste that were collected and stored in an uncontrolled manner in two official temporary storage sites and various illegal dumping sites, without any other treatment solution identified.

In this study case, the proposed sorting strategy is adapted to the limited open space and the urgency to clean the affected areas, constrains often encountered in dense urban areas. The recycling options identified are taking into consideration the recycling feasibility of the main post disaster waste streams at national level, as well as the local available resources. The results are emphasizing the need to improve the management of disaster waste for resilient territories, through the optimization of the relation between variables like sorting strategies, time and space constrains and recycling rate. These research challenges are just recently addressed, like for example in the research project DePOs (Hurricane Waste Studies) coordinated by Paris-Est Marne-la-Vallée University.

Keywords: disaster waste, recycling, temporary storage sites